

## **REMARKS**

### **I. General comments**

The Advisory Action indicates that the reply filed on November 16, 2006, has been considered, but is not deemed to place the application in condition for allowance. The previous amendment was not entered (until now).

The Examiner has not fully considered the claims and arguments presented in the previous amendment but has concluded that (A) three new matter issues were raised; (B) the Xin anticipation rejection may be dropped after the amendment is entered; and (C) the drawings are defective. This paper comments on each of these items and then repeats the same subject matter present in the reply filed on November 16, 2006.

#### **A. New Matter/Written Description (Advisory action, para. 1)**

According to the advisory action, the current version of claims 2, 16-18, and 33-34 will be rejected for lacking a written description for the reasons in the advisory action para. 1. For example, the Examiner emphasizes that the terms "greater than 5" and "less than 25" are not supported because there is neither an example nor word-for-word description.

The Examiner is directed to a well known case whose facts are similar to the present case. In In re Wertheim, 541 F.2d 257, 191 USPQ 90 (CCPA 1976), the ranges described in the original specification included a range of "25%- 60%" of solids content and specific examples of "36%" of solids content. A corresponding new claim limitation to "between 35% and 60%" met the description requirement, and it was irrelevant that the components of the solids content was generic and would vary from sample to sample.

In our case, the Examiner is directed to paragraphs 93 and 96, which contain the upper limit of 25, and Example 8, which contains the lower limit of 5. As was the case in Wertheim, it should not matter that the example was a species. One of ordinary skill in the art would take away concepts, such as that the inventor was in possession of the range 5-25 as recited. As a result, the Examiner is asked not to make a written description rejection.

#### **B. The Xin rejection (advisory action, paragraph 2)**

Is it believed that the Xin anticipation rejection may be dropped after the amendment is entered. The same comments that are in the November 16, 2006, response are repeated below. This rejection should be withdrawn.

**C. Drawings (advisory action, para. 3).**

The Examiner indicated that the drawings are defective for not showing an aspect ratio of at least 2 or at least 5. The Examiner required new drawings. This requirement is improper and should be withdrawn.

The aspect ratio is described and claimed in the application but is not critical to the understanding of the invention. Cf. Rule 83(a). The Examiner's point is believed to be more subtle and is related to his position under item (A), i.e., that the aspect ratio is "not" described so that the drawings must contain the missing description. This objection is respectfully traversed in tandem with the response under sub-header A above. Because the aspect ratio is described and claimed in the application but is not critical to the understanding of the invention per Rule 83(a), the objection is improper and should be withdrawn.

**II. Disposition of the claims**

Claims 1-44 are pending and stand rejected. Claims 4, 6-7, and 21-32 are withdrawn. Claims 1-3, 5, 8-20, and 33-44 were rejected. At a minimum withdrawn claims 21-23, 25-28, and 30-32 are requested to be rejoined once the base claims from which they depend are found allowable.

Claims 1, 4, 6, 8, 10, 12, 14, 19, 33-34, and 39 were amended as shown. Amendments to Claims 1, 4, 8, 10, 12, 14, and 19 are made, without prejudice or disclaimer, to remove the upper limit discussed in III A & B and to consistently use "to be" (has or have) over "with." The latter amendment was also made, without prejudice or disclaimer, to claims 33-34 and 39. Claim 6 was amended, without prejudice or disclaimer, for clarity. Claims 1 and 33 were amended, without prejudice or disclaimer, to remove the term "compositionally uniform," as discussed in III C. Claims 1, 16, 19, and 33 were amended, without prejudice or disclaimer, to change "2" to "--5--", as discussed in section IV B 2. No new matter is added by these amendments.

**III. Drawings**

The Examiner is respectfully asked to indicate if the drawings were accepted by checking the appropriate box on the Office action summary form PTOL-326.

**IV. 35 U.S.C. § 112 rejections**

The Examiner made three 35 U.S.C. § 112 rejections. Each is addressed under a separate header.

**A. Written description rejections under 35 U.S.C. § 112, paragraph 1 (upper limit).**

Claims 1-3, 5, 8-20, and 33-44 were rejected as lacking a written description of the upper limit 1,000,000 on the aspect ratio. Office action, para. 2. The Examiner does not seem to dispute that the upper limit was written in words; nor does the Examiner dispute that one of ordinary skill in the art would know whether or not a given nanoparticle would have an aspect ratio below the upper limit. Office action, para. 2. Instead, the Examiner relies on Regents of Univ. of California v. Eli Lilly, 119 F.3d 1559, 1568 (Fed. Cir. 1997) for the position that “for inventions in an unpredictable art, an adequate written description of a genus which embraces widely variant species cannot be achieved by disclosing only one species within the genus.”

The Examiner’s reliance on Eli Lilly is misplaced, as the facts in Eli Lilly were totally different. The Examiner is asked to focus on conception, i.e., invention, not enablement. In Eli Lilly, the claims recited a genus of vertebrate and mammal cDNA encoding insulin but the written description only showed one species of cDNA derived from a rat. Eli Lilly at 1566. Rat cDNA for insulin is a first chemical compound, human cDNA for insulin is a second distinct compound, etc. Eli Lilly at 1567. In other words, having only rat cDNA as a blazemark, one of ordinary skill in the art would not be able to identify other related cDNAs, let alone build a genus of related cDNAs; the conception of the cDNAs was not commensurate in scope with the claimed genus because a representative number of individual species falling within the genus were neither discovered nor described in terms of their structure, formula, etc. For example, not even a consensus sequence could be generated from a single species of cDNA for insulin itself.

After reciting black letter law, “A written description of an invention involving a chemical genus, like a description of a chemical species, ‘requires a precise definition, such as by

structure, formula, [or] chemical name,' of the claimed subject matter sufficient to distinguish it from other materials.” (citations omitted), Eli Lilly at 1568, the court concluded that a “description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus.” Eli Lilly at 1569. Thus, the court held that the district court did not clearly err on invalidity for lack of written description under the facts of the case. Eli Lilly at 1569.

Here, there is no doubt that one of ordinary skill in the art would know whether or not a given nanoparticle would have an aspect ratio below the upper limit. As a result, the invention, i.e., conception, was complete and described to the relevant audience. The analogy to Eli Lilly fails, because in that case, one of ordinary skill in the art would NOT know whether or not a given cDNA would have fallen within the scope of the genus. As a result, that Eli Lilly “invention” was neither complete, i.e., with respect to the entire genus, nor described. For at least these reasons, the rejection should be withdrawn.

**B. Enablement rejections under 35 U.S.C. § 112, paragraph 1 (upper limit).**

Claims 1-3, 5, 8-20, and 33-44 were rejected as lacking an enabling written description of the upper limit 1,000,000 on the aspect ratio. Office action, para. 3. It is believed that Claims 16-18 and 33-44 are not within the ambit of the supporting reasoning for the rejection. As to these claims, the rejection should be withdrawn. As amended without prejudice or disclaimer, the remaining rejected claims to recite no upper limit. The issue is avoided, and thus the rejection should be withdrawn.

**C. Written description rejections under 35 U.S.C. § 112, paragraph 1 (Compositionally Uniform).**

Claims 1-3, 5, and 33-34 were rejected as lacking a written description of the term “compositionally uniform.” Office action, para. 4. The Examiner urged that the term was unsupported in the as-filed specification, and that this was the reason that the claims were rejected. Office action, para. 4. (“There's nothing in these paragraphs [102-03] to identify or suggest that these nanofillers are of aspect ratio and/or compositionally uniform....”). The

present version of the claims removes this term without prejudice or disclaimer. It is respectfully submitted that the present rejection should be withdrawn.

**V. Anticipation rejections under 35 U.S.C. § 102**

Several anticipation rejections were made. Before addressing the rejections, some preliminary remarks regarding the effective filing date will be made.

**A. Effective filing date**

Without prejudice or disclaimer, it is submitted that the present claims should be entitled to at least 03-23-1999 as the earliest effective filing date, because the present application is believed to be a direct child of the '517 application. See Table 1, which shows the direct family line and the relationship as taken from PAIR.

Table 1. Present family's direct line.

Application no.	Filed	Status	Date	Relationship
10/811,628	03-29-2004	Pending		This application is a Continuation of
10/449,278	05-30-2003	6,830,822	12-14-2004	Which is a Division of
10/150,722	05-17-2002	6,602,595	08-05-2003	Which is a division of
09/274,517	03-23-1999	6,344,271	02-05-2002	Which claims the benefit of
60/107,318	11-06-1998	Expired		

Tapesh Yadav is an inventor common to each application.

The disclosures of each application are believed continuous with respect to the relevant subject matter. Submitted for the Examiner's convenience are redline copies of the following comparison documents, generated by Deltaview (a computer program that generates redlines):

Table 2. Exhibit Data.

Exhibit Number	Initial document	Final document
1	6,344,271	6,602,595
2	6,602,595	6,830,822
3	6,830,822	10/811,628
4	6,344,271	10/811,628

The text of each patent was cut and pasted directly from the PTO website into a WORD document. The text of the application was taken from PAIR's text version of application publication 2004/0180203. The Deltaview program was run using the initial and final documents as shown in Table 2. It is submitted that these exhibits support a continuity of disclosure.

Thus, the present application should be entitled to the benefit of at least the '517 application's filing date, i.e., 03-23-1999.

**B. Anticipation rejections under 35 U.S.C. § 102**

There are five anticipation rejections. Each is addressed under one of two headers after providing some contextual comments related to the groupings.

Table 3 shows the cited references as learned from the materials provided by the Examiner and or the file downloaded from PAIR. No search was made. Assuming the claims are given an effective date of not later than 03-23-1999, the references above the gray cells may be applied against the present claims while those below cannot.

Table 3. References cited against the claims and related counterparts listed on PAIR.

Publication Name	Published Date	Comment	Rejected Claims
Xin	1996		1, 3, 5, 16, 18-20, and 33-34
Schoonman	2000	post 03-23-1999	1, 3, 5, 8-20, and 33-34
Margrave	2002	post 03-23-1999	8-9
Kian Ping Loh	2004	post 03-23-1999	8-9, 16-21
Lee & Chen	2000	post 03-23-1999	12-13

*1. Group 1 (The bottom four patents)*

With respect to the rejections using Schoonman, Margrave, Kian Ping Loh, and Lee & Chen, the rejection should be withdrawn.

The undersigned intends to discuss the position taken on Schoonman with the Examiner if necessary.

*2. Group 2 (Xin)*

In response to the previous rejection, claim 1 was amended to recite “compositionally uniform.” In response, the Examiner maintained the rejection, thus rejecting the distinction. In this amendment, the “compositionally uniform” addition was removed.

Xin concerns CdSe quantum dots. Present claims 1, 16, 19, and 33 now recite an aspect ratio greater than 5, a number reported in example 8 for tungsten oxide. Thus, the present rejection should be withdrawn.

In summary, each of the anticipation rejections should be withdrawn.

**CONCLUSION**

Applicants respectfully request reconsideration and reexamination of the present application.

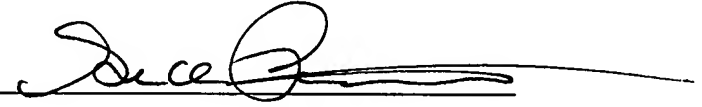
Applicants believe that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. § 1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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By 

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Enclosures:

Exhibits 1 (37 pages), 2 (62 pages), 3 (74 pages), & 4 (75 pages) as identified above (resubmitted as they are not available from the November 16, 2006, response; the Examiner could call the attorney of record for these document if they don't make it to the ifw on pair).